

that their membership were at first mainly made up of artisans rather than labourers, there is no reason, but the opposite, why the nation should not do its best to protect the health of its skilled workmen provided that personal independence and family responsibility are maintained. The suggestion of any such national system may be scouted as utopian. The same would have been said ten or a dozen years ago about the medical inspection of school children which is now in actual operation all over England and Wales, and is already regarded as a mere matter of course.

School medical inspection is excellent so far as it goes, but it applies only to school children between ages 5 and 14. It does nothing for the youth or adult, and, still more important, it does nothing for the age period 0-5 years, a period which should receive very special attention. Also as a rule it does not provide, and is not intended to provide, medical treatment. So far as utilized, the medical provident institutions would be free from these limitations.

#### CONCLUSION.

Concerning the incompleteness of a voluntary scheme, its value is not to be measured apart from other needed reforms. The proper feeding and rearing of pauper children, the control of boy labour, the decasualization of labour, labour bureaux, unemployment insurance, detention colonies for the vicious and the lazy and for weak-willed ne'er-do-wells, the safe-guarding of imbecile or feeble-minded young women by similar detention, the enforcement of every practical check on alcoholic indulgence—all these and other agencies have to be thought of as part of any sufficient plan of reform. Improvement in the general conditions of life and work resulting from such measures would quickly add to the numbers who would be in a position to become paying members of provident institutions. So long as human nature remains what it is, no panacea for all its defects can be found, but the simultaneous operation of agencies regarding whose value there is practically unanimous agreement, will do much in the desired direction. One of these agencies will be better preventive and curative medical treatment of the poor, and in whatever way that be achieved consistently with the preservation of individual responsibility, I am sure that it will play an important part in the advancement of the national welfare.

## VACCINATION IN INDIA.

BY

ANDREW BUCHANAN, M.A., M.D.,  
LIEUT.-COL. I.M.S.

As has frequently been pointed out for a good many years past, the very success which had attended vaccination in the United Kingdom has obscured to some extent the necessity for its continuance, and in a country in which nearly all the inhabitants are vaccinated it is difficult to obtain recent evidence that would appeal to the general public regarding the value of vaccination. Now in India, where although vaccination is on the whole popular, there are many places in which it has not been well carried out, and such places afford opportunities of studying the subject not available in a country like England, where vaccination has till recently been compulsory. There must be many members of the antivaccination party who, while quite honest in their belief that vaccination is injurious, will be ready to hear and consider evidence in favour of vaccination, and I should like for the benefit of such persons to relate some of my own experiences in India.

#### Objections to Vital Statistics.

I shall not attempt to convince the antivaccinationist by statistics regarding mortality, because such statistics are often vitiated owing to failure to distinguish between "vaccination" and "protection by vaccination." We know that the adult who has had only one vaccination mark in infancy, and has never been vaccinated again is not properly protected, and a comparison between the unvaccinated and those who have only one vaccination mark does not show fully the benefit to be derived from vaccination and revaccination. If we take a place like Berar, where vaccination is now very popular, and point

out that in the years 1869 to 1886 the number of deaths from small-pox was 45,286, while in the succeeding seventeen years (1887 to 1904) the number was only 9,126, the antivaccinationist may deny the accuracy of the statistics, or he may say that the diminution of the death-rate is due to improved sanitation, or to some other cause than vaccination. There is, however, a method by which the value of vaccination in India can be demonstrated without reference to vital statistics, and I have often wished that I could have an opportunity of showing to some of the leaders of the antivaccination party the very clear evidence available in some places where vaccination has been neglected.

#### A School Inspection.

I should set about it in this way. We should go to a school, say, in the Hoshangabad district, in the Central Provinces, and, after examining the boys' arms, separate the boys into two groups—those with and those without vaccination marks. As a rule, the vaccinated have three or four very distinct marks, and there would not be any difficulty in deciding who would be relegated to each group. We should next take each group separately and divide them into three subgroups, according to whether their faces are (a) *much*, (b) *little*, or (c) *not* marked by small-pox. I have among my papers in India a large number of the results of such inspections; but I can give one approximately from memory. It was made in a school in the south of the Hoshangabad district, where there had been some difficulty about vaccination. There were 50 boys in the school, of whom 30 had been vaccinated and 20 had not been vaccinated, and the results of inspection were as follows:

	Small-pox Marks.		
	Much.	Little.	Nil.
Vaccinated ... ..	0	5	25
Not vaccinated ... ..	10	7	3

That is, among the vaccinated there were none deeply marked with small-pox, while among the unvaccinated there were several whose faces were deeply pitted and only a very small number had escaped from small-pox. I should point out that here was a disease and a preventive, both of which left clear and distinct marks that cannot, except in very rare cases, be mistaken for anything else; that nearly every child was stamped either with one mark or the other, and that there was no other disease and preventive which left permanent and distinct marks in a similar way, so that there would be little room for argument or objection. It would be seen that if the child was not stamped on the arm it would almost certainly be stamped on the face. This same condition of things would be seen not in one school but in many, and the conclusion that vaccination either prevents small-pox or reduces its intensity could not be avoided.

#### Blindness Due to Small-pox.

I should like also to show the antivaccinationist the effect of small-pox on the eyesight. I remember one day attending a municipal meeting in Seoni in Hoshangabad district and finding that one of the municipal members had lost one eye from small-pox. On the same day I went to inspect a school and was met by the head master who had also lost one eye from the same disease. A few days later near the same place I saw a child, about 15 months old, deeply pitted with small-pox and with both eyes hopelessly destroyed. Shortly afterwards I saw a girl of 16 suffering from a severe attack of small-pox; pus was flowing freely from both eyes which were absolutely destroyed. It was a horrible sight, and I remember my wife, after I came from the hut in which the girl was isolated, said: "It made even you—hardened as you are—turn pale." Has the antivaccinationist ever considered how much blindness in India has been caused by small-pox?

#### Evidence from Old Men.

I should also like to take the antivaccinationist to some of the villages in which vaccination was not begun till about forty years ago—for example, in the Betul district in the

Central Provinces. The old men would tell how villages had been devastated by small-pox, and how the terrors of small-pox had been almost abolished since the introduction of vaccination. Ask these villagers what are the greatest boons which have been conferred on them by the British Government, and they will reply, first, security of life and property, and, secondly, the prevention of small-pox by vaccination. They have seen the evils of small-pox and they appreciate the benefits of vaccination, but how many of the antivaccination party have seen half a dozen cases of small-pox? How many of them have even seen a single case?

#### Miscellaneous Objections.

It is sometimes stated that diseases like syphilis have been conveyed by vaccination. That, however, is not an argument against vaccination, but is an argument against carelessness in preparing the lymph, or carelessness in performing the operation; and since the introduction of glycerinated calf lymph dangers of this kind are reduced to a minimum if not altogether abolished. We do not ask for the abolition of railways because a train has run off the line; we merely demand that extra precautions should be taken in future. Then it is well known that parents sometimes object to the vaccination of very young children, and in a country where all are vaccinated there is not the same necessity for early vaccination. The greater the success of the antivaccination campaign, the greater will be the necessity for early vaccination of children.

#### Conclusion.

The antivaccination party have recently been spreading their literature in India, where it is likely to do much more harm than in England, and I should like to appeal to them to weigh the evidence in favour of vaccination carefully before it is too late. I do not ask the antivaccinationist to accept my statements or figures; but I suggest that before spreading abroad literature in which vaccination is strongly condemned he is bound to ascertain, either by direct personal observation or by inquiry in a country in which vaccination has not been well carried out, what are the results when vaccination has been neglected.

## TWO CASES OF AFEBRILE ERYSIPELAS.

BY

W. CAMERON MACAULAY, B.A., M.B.LOND.,  
M.R.C.S.ENG., L.R.C.P.LOND.

THE following two cases appear anomalous in that in both the temperature was, for the most part, subnormal and in both the cerebral symptoms were early and profound. The latter manifestation was perhaps due to the fact that there was very little effort on the part of either patient to combat the disease—the one being an elderly man of enfeebled constitution and the other an infant of 3 weeks. The diarrhoea in the first case also appears unusual, constipation being the rule. It probably indicated a profoundly toxic condition.

#### CASE I.

A meat market clerk, aged 58, short, stout, alcoholic, and gouty, a sufferer from chronic bronchitis and emphysema, complained on December 9th, 1909, of great pain in his right foot and leg. He ascribed this to another attack of gout. His great toe, on which was a bunion surmounted by a corn, was very inflamed and swollen but not very tender; the chief pain was along the front of the tibia, where were several small, irregular, dark red purpuric spots. The temperature was subnormal and the pulse 76 and of good quality. It was ascertained that he had been cutting a corn on his bunion and applying a corn solvent. The urine contained sugar, though the specific gravity was not abnormal. The swelling of the rest of the foot followed, and by December 11th the skin of the whole foot and lower part of the leg was involved. Sensation in the foot was normal, and it remained warm. A bright red blush with distinct and clearly defined, though irregular, margin preceded the swelling by some hours. Vesicles now appeared over the great toe and elsewhere on the inflamed area. Almost from the beginning of his illness the patient was delirious, suffered from delusions, and defaecated involuntarily. He had, however, lucid intervals of very short duration. The stain gradually crept up the leg, and by December 17th was as high as the knee. On December 19th the knee was passed. The temperature still remained below 98° F. On December 20th diarrhoea of a stubborn nature

commenced, and coincident with this the temperature rose to 99.8° F., and remained so for three days, when it fell to 97° F. The patient now showed signs of progressive weakness and despondency. A sample of blood taken from the margin of the stain proved to be sterile. Injection of polyvalent anti-streptococcal serum (in 20 c.cm. dose) produced no beneficial effect. The stain spread steadily up the thigh to the buttock, following the lymphatics, and on December 27th the patient died. He was able to take nourishment to within half an hour of the end.

During the last four days the temperature remained subnormal (97° F. to 97.6° F.). In the daytime the patient was in a condition resembling the "typhoid state," and during the night he was almost maniacal, only his weakness preventing him from getting out of bed. During the last twenty-four hours he was constantly picking imaginary small objects from the bedclothes.

#### CASE II.

A female child, aged 3 weeks, born on December 1st, 1909. There was nothing abnormal about the birth: the umbilicus appeared healthy, and the child was apparently quite well till the present illness. On December 26th, 1909, it was noticed to be drowsy, and was difficult to feed and keep awake. On December 27th it was in a state of profound narcosis; its temperature was 97° F.; the heart and lungs were normal. A minute examination of the body revealed nothing. During Christmas time the mother had taken for a cough a mixture, obtained from a chemist, containing tr. camph. co., and, as it was thought this might in some way account for the condition, the infant was temporarily removed from the breast. It was artificially fed, and a few drops of brandy were administered from time to time. During the night the child roused somewhat; but on the morning of December 28th a rash appeared of bright red-brick colour, commencing round the right ear and spreading over the neck and right shoulder. The margin of the stain was not raised and was quite defined, and showed a very marked and abrupt contrast to the healthy skin. The temperature in the right axilla was 99° F., while that in the left axilla and of the body generally was 97° F. On December 29th the rash had spread over the whole of the thorax and down the arms to the elbows. In advance of the margin were some discrete isolated patches on the arms. The pinna of the right ear was now very swollen, and the external meatus almost occluded. The skin over the right mastoid process and right scapula was somewhat oedematous, but there was no fluctuation. The same night the child died. Twelve hours after death a small area of the skin near the margin of the stain was cauterized and incised, and a small piece of the subcutaneous cellular tissue was removed and submitted to bacteriological examination. A long-chained streptococcus in pure culture was obtained of the variety *S. erysipelatosus*.

Although there was no obvious external lesion, there is no doubt infection started in the neighbourhood of the ear in Case II, and judging from the fact that the cerebral symptoms preceded the cutaneous manifestations by quite forty-eight hours, there is a likelihood that the middle ear was first infected, and possibly from the throat.

My thanks are due to Mr. W. Sampson Handley, M.D., M.S., F.R.C.S., for his kindness in seeing the first case, and for his advice in the second.

## THE OPERATION FOR ELEPHANTIASIS SCROTI.

By F. A. BALDWIN, M.R.C.S., L.R.C.P., L.S.A.,  
BATHURST, GAMBIA, WEST AFRICA.

In marking out the incision of separation in the operation for the removal of elephantiasis scroti, the textbook that I have by me directs that, having made a shallow skin cut across the back of the tumour, "a similar shallow cut is made across the pubes. The corresponding extremities of these two cuts are then united either by a straight cut, or, if there be a little sound skin on the thigh aspect of the tumour, by a semilunar incision."

As no diseased skin should be left behind, the chief difficulty in most operations is to get sufficient healthy skin to cover the penis when the tumour is removed. The disadvantages that may arise are:

1. That when the flap is formed the lower edge may be  $1\frac{1}{2}$  in. or much more away from the corona of the penis, to which, if possible, it should be stitched.
2. That when it is possible to get some flap the weight of the tumour has so stretched the skin that the penis may be covered by thick, hairy, pubic skin.
3. That when the wound of the operation has healed up, and all retraction has taken place, the penis is carried in a semi-erect position.